REMARKS

Applicant is in receipt of the Office Action mailed June 1, 2005.

Claim Status

Claims 1-15, 19-22, and 24-25 were pending prior to entry of the present amendment.

Claims 1-2, 5-6, 10, 13-15, and 24 are herein amended.

Claims 16-23 have been canceled.

New claims 26-32 have been added.

Claims 1-15, and 24-32 are now pending.

Art Rejections

Claims 1-15, 19-22, and 24-25 were rejected under 35 U.S.C. 103(a) as being unpatentable over Foran et al. (USPN 6,072,500; hereinafter referred to simply as Foran) in view of Lin et al. ("A Parallel Rendering Approach to the Adaptive Supersampling Method"; hereinafter referred to simply as Lin).

Claim 1 recites:

> A graphics system comprising:
> a graphics processor configured to render an image comprising a plurality of regions, and to generate a plurality of samples that are rendered with a variable density of samples per pixel, wherein the density varies by region;
> a sample buffer coupled to said graphics processor for storing the plurality of samples; and
> a sample-to-pixel calculation unit coupled to said sample buffer, wherein said sample-to-pixel calculation unit is configured to select samples from the sample buffer and filter said samples to form output pixels.

Neither Foran nor Lin either singly or in combination teach or render obvious to "generate a plurality of samples that are rendered with a variable density of samples per pixel, wherein the density varies by region".

Lin does teach on page 12, lines 21-23:

> "...when scan converting a polygon, if the polygon covers the whole pixel, we sample the pixel only once. If the polygon partially covers the pixel, we perform a supersampling of that pixel."

However, Lin is silent on rendered sample density varying by region.

The current Office Action states in regard to claim 5, that Foran teaches "said density is selected on a per frame region basis from a predetermined group of densities" in column 4, lines 6-17:

> "FIG. 2a illustrates how a 16-bit supersample coverage mask is derived by the scan conversion subsystem 14 by sampling a polygon 30 of the vertex data at sixteen (0-15) discrete points 32. Each point 32 is aligned to a geometrically predefine 8-by 8 grid 34 over the current pixel, which has an origin 36. With respect to the supersample coverage mask of the preferred embodiment, the predetermined method for choosing such supersamples is that of point sampling. It should be noted, however, that the present invention is independent of the method by which samples are chosen and would work equally well with an area sampling technique."

Clearly, this cited passage and Fig. 2a of Foran is silent on rendered sample density varying by region.

Applicant submits that claim 1 is non-obvious and patentably distinguished over Foran and Lin for at least the reasons given above. Applicant further submits that the independent claims 24, 26, and 30 are also non-obvious and patentably distinguished over Foran and Lin for at least the reasons given above in support of claim 1.

Therefore, Applicant submits that independent claims 1, 24, 26, and 30 and their dependent claims are allowable.

CONCLUSION

In light of the foregoing amendments and remarks, Applicant submits the application is now in condition for allowance, and an early notice to that effect is requested.

If any extensions of time (under 37 C.F.R. § 1.136) are necessary to prevent the above referenced application(s) from becoming abandoned, Applicant(s) hereby petition for such extensions. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert & Goetzel PC Deposit Account No. 50-1505/5181-09612/JCH

Also enclosed herewith are the following items:

☒ Return Receipt Postcard

☐ Petition for Extension of Time

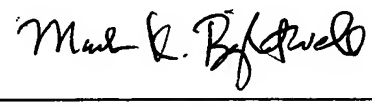
☐ Request for Approval of Drawing Changes

☐ Notice of Change of Address

☐ Check in the amount of $ for fees ( ).

☐ Other:

Respectfully submitted,



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